IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for the preparation of an aqueous polymer dispersion by free radical aqueous emulsion polymerization ~~of~~ comprising polymerizing at least one ethylenically unsaturated compound (monomer) in the presence of at least one dispersant, wherein

a) ~~in~~ into a reaction vessel at a temperature which is less than or equal to the starting reaction temperature T_S,

a_1) at least one portion of demineralized water,

a_2) at least one portion of at least one oil-soluble free radical initiator,

a_3) at least one portion of at least one dispersant,

a_4) ~~if appropriate~~ optionally, a portion of the at least one monomer and

a_5) ~~if appropriate~~ optionally, a portion of at least one water-soluble free radical initiator are initially ~~taken~~ added to form a reaction mixture in the reaction vessel, thereafter

b) the reaction mixture obtained is, ~~if appropriate~~ optionally, heated to the starting reaction temperature T_S, and thereafter

c) the following are metered into the reaction mixture:

c_1) ~~if appropriate~~ optionally, the remaining amount of demineralized water,

c_2) ~~if appropriate~~ optionally, the remaining amount of the at least one oil-soluble free radical initiator,

c_3) ~~if appropriate~~ optionally, the remaining amount of the at least one dispersant,

c_4) the total amount or, ~~if appropriate~~ optionally, the remaining amount of the at least one monomer and

c_5) the main amount of the at least one water-soluble free radical initiator, and

d) the reaction mixture is heated to an end reaction temperature T_E during the metering of the at least one monomer, and wherein

the at least one water-soluble free radical initiator has ~~initiators being understood as meaning those which have~~ a solubility of ≥ 1% by weight at 20°C and atmospheric pressure in demineralized water, ~~while~~ and the at least one oil-soluble free radical ~~initiators being understood as meaning those which have~~ initiator has a solubility of < 1% by weight under the abovementioned conditions and the total amount of water being such that the aqueous polymer dispersion obtained has a solids content of from 20 to 70% by weight.

Claim 2 (Original): The process according to claim 1, wherein the at least one water-soluble free radical initiator initiates a free radical polymerization reaction of the at least one monomer at the starting reaction temperature T_S.

Claim 3 (Currently Amended): The process according to ~~either of claims 1 and 2~~ Claim 1, wherein the at least one oil-soluble free radical initiator has a half-life of ≥ 10 hours at the starting reaction temperature T_S and a half-life of ≤ 5 hours at the end reaction temperature T_E.

Claim 4 (Currently Amended): The process according to ~~any of claims 1 to 3~~ Claim 1, wherein $T_E \geq T_S + 10°C$.

Claim 5 (Currently Amended): The process according to ~~any of claims 1 to 4~~ Claim 1, wherein T_S is from ≥ 30 to ≤ 120°C and T_E is from ≥ 80 to ≤ 200°C.

Claim 6 (Currently Amended): The process according to ~~any of claims 1 to 5~~ Claim 1, wherein the amount of water-soluble and oil-soluble free radical initiator is in each case from 0.01 to 5% by weight, based on the total amount of monomer.

Claim 7 (Currently Amended): The process according to ~~any of claims 1 to 6~~ Claim 1, wherein the pressure during the polymerization is chosen so that the reaction mixture does not boil at any time.

Claim 8 (Currently Amended): The process according to ~~any of claims 1 to 7~~ Claim 1, wherein the at least one water-soluble free radical initiator used is a mono- or di-alkali metal or ammonium salt of peroxodisulfuric acid.

Claim 9 (Currently Amended): The process according to ~~any of claims 1 to 8~~ Claim 1, wherein the at least one oil-soluble free radical initiator used is [[a]] at least one compound selected from the group consisting of tert-butyl peroxy-2-ethylhexanoate (Trigonox® 21), tert-amyl peroxy-2-ethylhexanoate, tert-butyl peroxybenzoate (Trigonox® C), tert-amyl peroxybenzoate, tert-butyl peroxyacetate, tert-butyl peroxy-3,5,5-trimethylhexanoate (Trigonox® 42 S), tert-butyl peroxyisobutanoate, tert-butyl peroxydiethylacetate, tert-butyl peroxypivalate, tert-butyl peroxyisopropylcarbonate, (Trigonox® BPIC) and tert-butyl peroxy-2-ethylhexylcarbonate (Trigonox® 117).

Claim 10 (Currently Amended): The process according to ~~any of claims 1 to 9~~ Claim 1, wherein the reaction mixture is kept at the end reaction temperature T_E for at least a further 30 minutes after the end of the monomer metering.

Claim 11 (Currently Amended): The process according to ~~any of claims 1 to 10~~ Claim 1, wherein the reaction mixture is stripped with inert gas and/or steam after the end of the monomer metering.